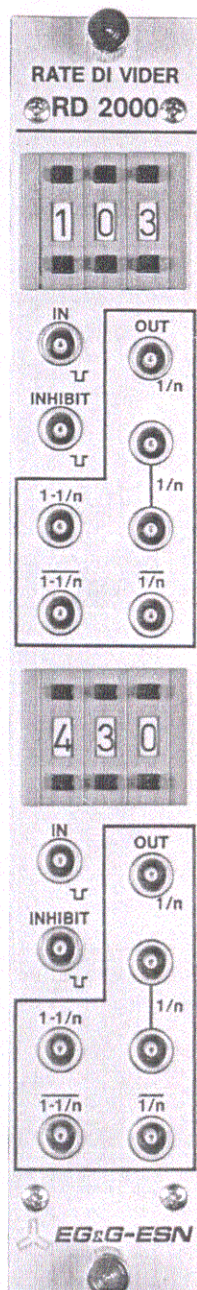


RD2000

Dual Fast-Rate Divider

- Rate reduction with pulse timing preserved
- Gates every nth input pulse directly to 1/n output
- Pulse rate division between 1000:1 and 1:1
- 40-MHz maximum input rate
- Propagation delay independent of ratio



The EG&G ORTEC/ESN Model RD2000 is a single-width NIM module that incorporates two independent-rate (frequency) dividers. All inputs and outputs are Fast-NIM compatible. The 1/n output signal has a rate that is equal to the input signal rate divided by the front-panel setting "n", where "n" is any integer number between 1 and 1000. In order to preserve timing information, every nth pulse is gated directly to the 1/n output. There is a single, 16-mA 1/n output and a set of dual, bridged, 32-mA 1/n outputs. The Model RD2000 also has a 1-1/n output for which each nth input is suppressed. The complement of both the 1/n and 1-1/n outputs is also provided, making a total of six outputs for each channel. All outputs have the same pulse width as the input pulse. The input-output propagation delay is typically 13 ns and is independent of the "n" setting.

An inhibit input allows the gating-off of input pulses.

Specifications

PERFORMANCE

RANGE OF "n" SETTING Any integer between 1 and 1000.

MAXIMUM INPUT RATE 40 MHz.

PROPAGATION DELAY Typically 13 ns, independent of "n" setting.

CONTROLS AND INDICATORS

n Front-panel, 3-decade, push-button switch with indicator selects the integer value of n from 1 to 1000.

INPUTS

IN Front-panel LEMO connector accepts negative, Fast-NIM logic signals. The IN signal is blocked for the duration of the INHIBIT signal. Minimum amplitude -12 mA (-600 mV), minimum width 10 ns; 50-Ω input impedance.

INHIBIT Front-panel LEMO connector accepts negative, Fast-NIM logic signals. The IN signal is blocked for the duration of the INHIBIT signal. Minimum amplitude -12 mA (-600 mV), minimum width 10 ns; 50-Ω input impedance.

OUTPUTS

1/n OUT One normal front-panel output, and one pair of bridged front-panel outputs. LEMO connectors with negative Fast-NIM outputs. Furnished every nth pulse gated through directly from the input. Output current nominally -16 mA for the normal output, and -32 mA for the pair of bridged outputs.

1/n OUT Front-panel LEMO connector provides the complement of the 1/n output signal. Negative, Fast-NIM output, nominally -16 mA output current.

1-1/n OUT Front-panel LEMO connector delivers all input pulses, except every nth pulse. Negative, Fast-NIM output, nominally -16 mA output current.

1-1/n OUT Front-panel LEMO connector provides the complement of the 1-1/n output signal. Negative, Fast-NIM output, nominally -16 mA output current.

ELECTRICAL AND MECHANICAL

POWER REQUIRED The Model RD2000 derives its power from a standard NIM bin/power supply, such as the EG&G ORTEC Model 4001A/4002D. The required power is -6 V at 950 mA.

WEIGHT 0.5 kg (1.1 lb).

DIMENSIONS NIM-standard single-width module, 3.43 × 22.13 cm (1.35 × 8.714 in.) front panel per TID-20893 (Rev).

Ordering Information

To order, specify:

Model	Description
RD2000	Dual Fast-Rate Divider